

AMENDMENTS TO THE CLAIMS

Please amend the claims of this application as follows:

1. (Currently amended) A dielectrophoretic display comprising:
a substrate having walls defining at least one cavity, the cavity having a viewing surface and a side wall inclined to the viewing surface;
a suspending fluid contained within the cavity;
a plurality of ~~at least one~~ a first type of particle suspended within the suspending fluid, the first type of particle having a first optical characteristic and a first electrophoretic mobility;
a plurality of a second type of particle suspended within the suspending fluid, the second type of particle having a second optical characteristic different from the first optical characteristic and a second electrophoretic mobility different from the first electrophoretic mobility;
a backing member disposed on the opposed side of the cavity from the viewing surface, at least part of the backing member having a third optical characteristic different from the first and second optical characteristics; and
means for applying to the substrate an electric field effective to cause dielectrophoretic movement of the first and second types of particles to the side wall of the cavity.

Claims 2 to 4. (Cancelled).

5. (Currently amended) A dielectrophoretic display according to claim [[4]]1 wherein the first and second electrophoretic mobilities differ in sign, so that the first and second types of particles move in opposed directions in an electric field.

6. (Currently amended) A dielectrophoretic display according to claim [[4]]1 wherein the suspending fluid is substantially uncolored.

Claim 7. (Cancelled).

8. (Currently amended) A dielectrophoretic display according to claim [[7]]1 wherein the backing member comprises areas having third and fourth optical

characteristics different from each other and from the first and second optical characteristics.

9. (Currently amended) A dielectrophoretic display according to claim [[7]]1 wherein the backing member comprises areas having red, green and blue or yellow, cyan and magenta colors.

10. (Currently amended) A dielectrophoretic display according to claim [[7]]1 wherein first and second optical characteristics comprise black and white colors.

11. (Original) A dielectrophoretic display according to claim 1 wherein the cavity has a non-circular cross-section as seen from the viewing surface.

12. (Original) A dielectrophoretic display according to claim 11 wherein the cavity has a polygonal cross-section as seen from the viewing surface.

13. (Currently amended) A dielectrophoretic display according to claim 1 wherein ~~the~~ at least one of the first and second types of particles is formed from an electrically conductive material.

14. (Currently amended) A dielectrophoretic display according to claim 13 wherein the electrically conductive material is ~~formed from~~ a metal or carbon black.

15. (Currently amended) A dielectrophoretic display according to claim 1 wherein ~~the~~ at least one of the first and second types of particles is formed from a doped semiconductor.

16. (Original) A dielectrophoretic display according to claim 1 wherein the substrate comprises at least one capsule wall so that the dielectrophoretic display comprises at least one capsule.

17. (Original) A dielectrophoretic display according to claim 16 comprising a plurality of capsules, the capsules being arranged in a single layer.

18. (Currently amended) A dielectrophoretic display according to claim 1 wherein the substrate comprises a continuous phase surrounding a plurality of discrete droplets of the suspending fluid having the ~~at least one~~ first and second types of particles suspended therein.

19. (Original) A dielectrophoretic display according to claim 1 wherein the substrate comprises a substantially rigid material having the at least one cavity formed therein, the substrate further comprising at least one cover member closing the at least one cavity.

20. (Currently amended) A process for operating a dielectrophoretic display, the process comprising:

providing a substrate having walls defining at least one cavity, the cavity having a viewing surface and a side wall inclined to the viewing surface; a suspending fluid contained within the cavity; ~~and a plurality of at least one~~ a first type of particle suspended within the suspending fluid, the first type of particle having a first optical characteristic and a first electrophoretic mobility; a plurality of a second type of particle suspended within the suspending fluid, the second type of particle having a second optical characteristic different from the first optical characteristic and a second electrophoretic mobility different from the first electrophoretic mobility; and a backing member disposed on the opposed side of the cavity from the viewing surface, at least part of the backing member having a third optical characteristic different from the first and second optical characteristics; and

applying to the substrate an electric field effective to cause dielectrophoretic movement of the first and second types of particles to the side wall of the cavity.

21. (Original) A process according to claim 20 wherein the electric field is an alternating electric field.

Claims 22 and 23. (Cancelled).

24. (Currently amended) A process according to claim ~~[[23]]~~20 wherein the first and second electrophoretic mobilities differ in sign, so that the first and second types of particles move in opposed directions in an electric field.

25. (Original) A process according to claim 24 further comprising:

applying an electric field of a first polarity to the cavity, thereby causing the first type of particles to approach the viewing surface and the cavity to display the first optical characteristic at the viewing surface; and

applying an electric field of a polarity opposite to the first polarity to the cavity, thereby causing the second type of particles to approach the viewing surface and the cavity to display the second optical characteristic at the viewing surface.

Claim 26. (Cancelled).

27. (Currently amended) A process according to claim ~~[[26]]~~20 wherein the backing member comprises areas having third and fourth optical characteristics different from each other and from the first and second optical characteristics.

28. (Currently amended) A process according to claim 20 wherein ~~the~~ at least one of the first and second types of particles is formed from an electrically conductive material.

29. (Currently amended) A process according to claim 28 wherein the at least one type of particle electrically conductive material is formed from ~~a metal or carbon black~~.

30. (Currently amended) A process according to claim 28 wherein ~~the~~ at least one of the first and second types of particles is formed from a doped semiconductor.

31. (Original) A process according to claim 20 wherein the substrate comprises at least one capsule wall so that the dielectrophoretic display comprises at least one capsule.

32. (Original) A process according to claim 20 wherein the substrate comprises a plurality of capsules, the capsules being arranged in a single layer.

33. (Currently amended) A process according to claim 20 wherein the substrate comprises a continuous phase surrounding a plurality of discrete droplets of the suspending fluid having the ~~at least one~~first and second types of particles suspended therein.

34. (Original) A process according to claim 20 wherein the substrate comprises a substantially rigid material having the at least one cavity formed therein, the substrate further comprising at least one cover member closing the at least one cavity.

Please add the following new claims:

35. (New) A dielectrophoretic display comprising:

a substrate having walls defining at least one cavity, the cavity having a viewing surface and a side wall inclined to the viewing surface;

a suspending fluid contained within the cavity;

a plurality of at least one type of particle suspended within the suspending fluid, the particles having a first optical characteristic;

a backing member disposed on the opposed side of the cavity from the viewing surface, at least part of the backing member having a second optical characteristic different from the first optical characteristics; and

means for applying to the substrate an electric field effective to cause dielectrophoretic movement of the particles to the side wall of the cavity.

36. (New) A dielectrophoretic display according to claim 35 wherein the suspending fluid is substantially uncolored, and has suspended therein only a single type of particle.

37. (New) A dielectrophoretic display according to claim 35 wherein at least some of the at least one type of particle are electrically charged.

38. (New) A dielectrophoretic display according to claim 35 wherein the cavity has a non-circular cross-section as seen from the viewing surface.

39. (New) A dielectrophoretic display according to claim 38 wherein the cavity has a polygonal cross-section as seen from the viewing surface.

40. (New) A dielectrophoretic display according to claim 35 wherein the at least one type of particle is formed from an electrically conductive material.

41. (New) A dielectrophoretic display according to claim 40 wherein the at least one type of particle is formed from a metal or carbon black.

42. (New) A dielectrophoretic display according to claim 35 wherein the at least one type of particle is formed from a doped semiconductor.

43. (New) A dielectrophoretic display according to claim 35 wherein the substrate comprises at least one capsule wall so that the dielectrophoretic display comprises at least one capsule.

44. (New) A dielectrophoretic display according to claim 43 comprising a plurality of capsules, the capsules being arranged in a single layer.

45. (New) A dielectrophoretic display according to claim 35 wherein the substrate comprises a continuous phase surrounding a plurality of discrete droplets of the suspending fluid having the at least one type of particle suspended therein.

46. (New) A dielectrophoretic display according to claim 35 wherein the substrate comprises a substantially rigid material having the at least one cavity formed therein, the substrate further comprising at least one cover member closing the at least one cavity.

47. (New) A process for operating a dielectrophoretic display, the process comprising:

providing a substrate having walls defining at least one cavity, the cavity having a viewing surface and a side wall inclined to the viewing surface, a suspending fluid contained within the cavity; and a plurality of at least one type of particle suspended within the suspending fluid, the particles having a first optical characteristic; and a backing member disposed on the opposed side of the cavity from the viewing surface, at least part of the backing member having a second optical characteristic different from the first optical characteristic; and

applying to the substrate an electric field effective to cause dielectrophoretic movement of the particles to the side wall of the cavity.

48. (New) A process according to claim 47 wherein the electric field is an alternating electric field.

49. (New) A process according to claim 47 wherein at least some of the at least one type of particle are electrically charged.